

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-37 (Cancelled)

38. (New) A method of assigning a handover signal strength threshold to a cell in a cellular communications system, comprising:

classifying cells of said communications system into multiple handover-related classes based on radio coverage characteristics of said cells, each handover-related class being associated with a handover signal strength threshold and each handover-related class comprises multiple cells;

determining to which handover-related class said cell is associated; and assigning, to said cell, the handover signal strength threshold associated with said determined handover-related class,

wherein a handover signal strength threshold associated to a first handover-related class of said multiple handover-related classes being different from a handover signal strength threshold associated to a second handover-related class of said multiple handover-related classes.

39. (New) A method of triggering a handover-related procedure for a user equipment in a cellular communications system, comprising:

classifying cells of said communications system into multiple handover-related classes based on radio coverage characteristics associated with said cells, each handover-related class comprises multiple cells;

assigning, for each handover-related class, a unique handover signal strength threshold;

generating a handover triggering command based on measured signal quality for a communications link between said user equipment and a base station of a cell and on an assigned handover signal strength threshold associated with the handover-related class of said cell; and

transmitting said handover triggering command to said user equipment, said handover triggering command allowing said user equipment to perform said handover-related procedure involving said cell,

wherein a handover signal strength threshold associated to a first handover-related class of said multiple handover-related classes being different from a handover signal strength threshold associated to a second handover-related class of said multiple handover-related classes.

40. (New) A method for modifying a list of connected cells for a user equipment in a cellular communications system, comprising:

measuring a signal quality for a communications link between said user equipment and a base station of a cell;

receiving a handover signal strength threshold for said cell, said handover signal strength threshold being determined based on the radio coverage characteristics of said cell; and

modifying said list based on said measured signal quality and said received handover signal strength threshold.

41. (New) The method according to claim 40, further comprising:
classifying cells of said communications system into multiple handover-related classes based on radio coverage characteristics of said cells, each handover-related class comprises multiple cells;

assigning, for each handover-related class, a handover signal strength threshold; and

determining to which handover-related class said cell is associated,
wherein a handover signal strength threshold associated to a first handover-related class of said multiple handover-related classes being different from a handover signal strength threshold associated to a second handover-related class of said multiple handover-related classes.

42. (New) The method according to claim 40, further comprising:
measuring a signal quality for a communications link between said user equipment and a base station of a current best serving cell to which said user equipment is connected; and

generating a list update request based on a comparison between said measured signal quality of said current best serving cell, said measured signal quality of said cell and said handover signal strength threshold.

43. (New) The method according to claim 42, wherein said modifying step comprises:

receiving a list update command generated based on said list update request; and

updating said list based on said received list update command.

44. (New) The method according to claim 42, wherein said request generating step comprises generating a cell add request if said signal quality of said cell is larger than said signal quality of said current cell subtracted by said handover signal strength threshold.

45. (New) The method according to claim 42, wherein said request generating step comprises generating a cell delete request if said signal quality of said cell is smaller than said signal quality of said current cell subtracted by said handover signal strength threshold.

46. (New) The method according to claim 39, wherein said generating step comprises:

receiving a handover-triggering request from said user equipment, said request being generated based on said measured signal quality of said cell, said handover signal strength threshold and measured signal quality for a communications link between said user equipment and a base station of a current best serving cell to which said user equipment is connected; and
generating said handover triggering command based on said request.

47. (New) The method according to claim 38, further comprising:
determining communications traffic statistics for said cellular communications system; and
re-classifying said cells of said communications system based on said radio coverage characteristics of said cells and said determined communications traffic statistics.

48. (New) The method according to claim 38, wherein each handover-related class being associated with a unique handover signal strength threshold.

49. (New) A system for assigning a handover signal strength threshold to a cell in a cellular communications system, said system comprising:
means for classifying cells of said communications system into multiple handover-related classes based on radio coverage characteristics of said cells,

each handover-related class being associated with a handover signal strength threshold and each handover-related class comprises multiple cells;

means, connected to said classifying means, for determining to which handover-related class said cell is associated; and

means, connected to said determining means, for assigning, to said cell, the handover signal strength threshold associated with said determined handover-related class,

wherein a handover signal strength threshold associated to a first handover-related class of said multiple handover-related classes being different from a handover signal strength threshold associated to a second handover-related class of said multiple handover-related classes.

50. (New) The system according to claim 49, wherein said assigning means is configured for assigning a unique set of multiple handover signal strength thresholds to each handover-related class.

51. (New) The system according to claim 49, wherein said classifying means is configured for re-classifying said cells of said communications system based on radio coverage characteristics of said cells and communications traffic statistics for said communications system.

52. (New) A system for triggering a handover-related procedure for user equipment in a cellular communications system, said system comprising:

means for classifying cells of said communications system into multiple handover-related classes based on radio coverage characteristics of said cells, each handover-related class comprises multiple cells,

means for assigning, for each handover-related class, a handover signal strength threshold;

means for generating a handover triggering command based on measured signal quality for a communications link between said user equipment and a base station of a cell and a handover signal strength threshold associated with the handover-related class of said cell; and

means for transmitting said handover triggering command to said user equipment, said handover triggering command allowing said user equipment to perform said handover-related procedure involving said cell,

wherein a handover signal strength threshold associated to a first handover-related class of said multiple handover-related classes being different from a handover signal strength threshold associated to a second handover-related class of said multiple handover-related classes.

53. (New) The system according to claim 52, further comprising means for receiving a handover-triggering request from said user equipment, said request being generated based on said measured signal quality of said cell, said handover signal strength threshold and measured signal quality for a communications link between said user equipment and a base station of a current best serving cell to which said user equipment is connected, and said

generating means is configured for generating said handover triggering command based on said request.

54. (New) The system according to claim 49, wherein said system is provided in a radio network controlling node in said communications system.

55. (New) A unit for modifying a list of connected cells for user equipment in a cellular communications system, said unit comprising:

means for measuring signal quality for a communications link between said user equipment and a base station of a cell;

means for receiving a handover signal strength threshold for said cell, said handover signal strength threshold being determined based on the radio coverage characteristics of said cell; and

means, connected to said measuring means and said receiving means, for modifying said list based on measured signal quality and said received handover signal strength threshold.

56. (New) The unit according to claim 55, wherein cells of said communications system are classified into multiple handover-related classes based on radio coverage characteristics of said cells and each handover-related class being associated with a unique handover signal strength threshold.

57. (New) The unit according to claim 55, wherein said measuring means is configured for measuring signal quality for a communications link between said user equipment and a base station of a current best serving cell to which said user equipment is connected, and said unit further comprising means for generating a list update request based on a comparison between said measured signal quality of said current cell, said measured signal quality of said cell and said handover signal strength threshold.

58. (New) The unit according to claim 57, further comprising means for receiving a list update command generated based on said list update request, and said modifying means being configured for updating said list based on said received list update command.

59. (New) The unit according to claim 57, wherein said generating means comprises means for generating a cell add request if said generating means finds that said signal quality of said cell is larger than said signal quality of said current cell subtracted by said handover signal strength threshold.

60. (New) The unit according to claim 57, wherein said generating means comprises means for generating a cell delete request if said generating means finds that said signal quality of said cell is smaller than said signal quality of said current cell subtracted by said handover signal strength threshold.

61. (New) The unit according to claim 55, wherein said unit is provided in said user equipment.

62. (New) A user equipment of a cellular communications system, said unit comprising:

a signal quality measurer configured to measure signal quality for a communications link between said user equipment and a base station of a cell;

a handover requester configured to receive a handover signal strength threshold for said cell, said handover signal strength threshold being determined based on the radio coverage characteristics of said cell; and

a list modifier connected to said signal quality measurer and said handover requester, said list modifier configured to modifying a list of connected cells for said user equipment based on measured signal quality and said received handover signal strength threshold.

63. (New) The user equipment according to claim 62, wherein cells of said communications system are classified into multiple handover-related classed based on radio coverage characteristics of said cells and each handover-related class being associated with a unique handover signal strength threshold.

64. (New) The user equipment according to claim 62,
wherein said signal quality measurer is arranged to measure signal quality for a communications link between said user equipment and a base station of a current best serving cell to which said user equipment is connected, and

wherein said handover requester comprises a comparator configured to compare said measured signal quality of said current cell, said measured signal quality of said cell and said handover signal strength threshold, wherein said handover requester is configured to generate a list update request based on a comparison made by the comparator.

65. (New) The user equipment according to claim 64, wherein said list modifier is arranged to receive a list update command generated based on said list update request, and arranged to update said list based on said received list update command.

66. (New) The user equipment according to claim 64, wherein said handover requester further comprises:

a list entry adder configured to generate a cell add request when the comparator finds that said signal quality of said cell is larger than said signal quality of said current cell subtracted by said handover signal strength threshold; and

a list entry deleter configured to generate a cell delete request when the comparator finds that said signal quality of said cell is smaller than said signal quality of said current cell subtracted by said handover signal strength threshold.